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	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
APPLICATION NO. 09/764,112	01/19/2001	Sang Mun Lee	8733.387.00	8135
20027	90 08/11/2003 LONG & ALDRIDGE	ELLP	EXAMINER	
1900 K STREE WASHINGTO	T, NW		PARKER, KENNETH	
WASHINGTO	N, DC 20000		ART UNIT	PAPER NUMBER
•			2871	
			DATE MAILED: 08/11/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

			/2/18			
	Application No.	Applicant(s)	V			
	09/764,112	LEE ET AL.				
Office Action Summary	Examiner	Art Unit				
	Kenneth A Parke					
The MAILING DATE of this communication app Period for Reply	pears on the cover	sheet with the correspondence ac	idress			
A SHORTENED STATUTORY PERIOD FOR REPL' THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a repl - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statute - Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).  Status	36(a). In no event, howe	ver, may a reply be timely filed mum of thirty (30) days will be considered time SIX (6) MONTHS from the mailing date of this of become ABANDONED (35 U.S.C. § 133).	ly. communication.			
1) Responsive to communication(s) filed on <u>03</u> .	June 2003 .					
,	nis action is non-fi					
3) Since this application is in condition for allow closed in accordance with the practice under Disposition of Claims	ance except for	rmal matters, prosecution as to the 1935 C.D. 11, 453 O.G. 213.	ne merits is			
4) $\boxtimes$ Claim(s) $\frac{1-17}{2}$ is/are pending in the application	n.					
4a) Of the above claim(s) is/are withdra		ation.				
5) Claim(s) 10-17 is/are allowed.						
6)⊠ Claim(s) <u>1</u> is/are rejected.						
7) Claim(s) 2,3-9 is/are objected to.						
8) Claim(s) are subject to restriction and/or election requirement.						
Application Papers						
9) The specification is objected to by the Examiner.						
10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.						
Applicant may not request that any objection to the	ne drawing(s) be he	d in abeyance. See 37 CFR 1.85(a)	•			
11) The proposed drawing correction filed on is: a) ☐ approved b) ☐ disapproved by the Examiner.						
If approved, corrected drawings are required in reply to this Office action.						
12) The oath or declaration is objected to by the Ex	xaminer.					
Priority under 35 U.S.C. §§ 119 and 120						
13) Acknowledgment is made of a claim for foreig	n priority under 3	5 U.S.C. § 119(a)-(d) or (f).				
a) ☐ All b) ☐ Some * c) ☐ None of:						
1. Certified copies of the priority documen	ts have been rece	eived.				
2. Certified copies of the priority documen	ts have been rece	eived in Application No				
<ul> <li>3. Copies of the certified copies of the price</li> <li>application from the International Book</li> <li>* See the attached detailed Office action for a lise</li> </ul>	ureau (PCT Rule	17.2(a)).	l Stage			
14) Acknowledgment is made of a claim for domes			al application).			
a) The translation of the foreign language pr	ovisional applicat	on has been received.				
Attachment(s)	- -					
Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449) Paper No(s)	4) 5) 6)	Interview Summary (PTO-413) Paper N Notice of Informal Patent Application (P Other:				

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## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Tanaka et al 5359449 in view of Nakamura et al 5835181 and Inoue et al 6285435,

Hida et al, 5936695 and Oshima et al, 5725032.

Lacking from the liquid crystal remover, the sealer by UV, and the conveying apparatus being an elevator. The remover was conventional for the benefit of cleaning as evidenced by Nakamura Inoue as recited below. Therefore, it would have been obvious to those of ordinary skill to employ a "liquid crystal remover" for the benefit of cleaning the cell.

After the filling step, the pressures at the respective parts of the cell 1 are restored to the atmospheric pressure, the cell is cooled to room temperature, and an excessive liquid crystal attached to the first and second apertures is removed by wiping with a cloth or by washing with a solvent of, e.g., ketone-type, such as acetone or methyl ethyl ketone. Thereafter, the apertures are sealed with a sealing agent (e.g., epoxy resin) similar to the sealing agent 10.

#### And Inoue:

The primary causes of such bubbles 209 being left are: volume contraction of the polymer dispersed liquid crystals 207 solidifying concomitantly with phase separation of mixture 205; and an inability to coat seal resin 6 to the inside of recesses 209, which are formed on the surface of mixture 205 contacting seal resin 206 by bubbles 209 as shown by the imaginary line in FIG. 22, as a result of even mixture 205 inside injection opening 203a being wiped away when the area

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around injection opening 203a is cleaned by wiping with a cloth

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before applying seal resin 206.

UV light for sealing is also not taught by the primary reference but was well known as not requiring heating as evidenced by Hida et al (column 7 and 8, lines 25-40 each), and would have been obvious for that reason. Therefore, it would have been obvious to those of ordinary skill to employ a "sealer" for the benefit of sealing the cell without requiring heating.

The Tanaka reference shows that the liquid crystal and the resevoir need to be moved vertically relative to each other, but it is not clear that the liquid crystal is raised or lowered. The reference Oshima shows that with such systems either the cells or the resevoir can be moved (col. 3, lines 30-39), showing that the two were functionally equivalent alternatives. Therefore, it would have been obvious to those of ordinary skill to employ a the liquid crystal cells moved ( therefore the conveyor would be an elevator) as opposed to the resevoir moved as the two were well known functionally equivalent alternatives, and thefore the moving of the cells functions equally well.

Loading, heating and injecting are all done

Allowable Subject Matter

Claims 2-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim.

Claims 10-17 are allowed.

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### Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A Parker whose telephone number is 703-305-6202. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.

Kenneth A Parker Primary Examiner Art Unit 2871

August 5, 2003